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MOUNTAIN PINE BEETLE INFESTATION

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CLARK FORK RANGER DISTRICT
KANIKSU NATIONAL FOREST

MOUNTAIN PINE BEETLE

INFESTATIONS IN WESTERN WHITE PINE STANDS OF THE LIGHTNING CREEK DRAINAGE

The mountain pine beetle has been a long-time resident in the Lightning Creek drainage. Western white pine trees in the drainage are nearing the end of their normal life expectancy and, therefore, have become more subject to bark beetle attack. Extremely dry summers in 1966 and 1967 further weakened the 200 to 300 year-old trees, creating conditions favorable to insect activity. This has caused their numbers to multiply to epidemic proportions. Infestations will remain chronic until nearly all the mature white pine in the drainage are killed. Occasionally, infestations will subside naturally, but with the mountain pine beetle this is the exception, not the rule.

Evidence of bark beetle activity along Lightning Creek is most apparent in the upper portion of the drainage (from Rattle Creek to Moose Creek). Numerous white pine trees are also infested in the Char Creek, Porcupine Creek, Wellington Creek, and Rattle Creek drainages.

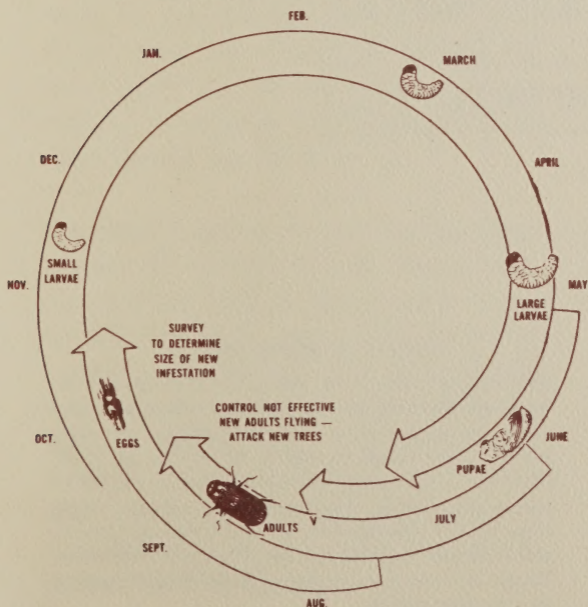
Infested trees are most easily identified by the color change of the needles; The needles normally change from green to yellowish green the first year of attack and then to a rusty brown the second year. By the end of the third year the tree has lost nearly all its needles and is a dead snag. Newly infested trees may be detected by pitch tubes and boring dust in the bark crevices. Pitch tubes are masses of reddish resin mixed with bark and wood borings. Each tube marks a beetle entrance or attack.

THE MOUNTAIN PINE BEETLE

The mountain pine beetle is a small black bark beetle about 3/16" long.

The mature adults fly from the brood trees in which they developed and attack other live green trees from June to September. Under epidemic conditions, the brood from one tree will attack from two to as many as ten new trees the next year. The female, followed by the male, chews a hole through the bark to the wood. She then makes a vertical gallery in the moist living layer between the bark and the wood in which she lays eggs. During the egg laying process a fungus called blue stain is introduced. This fungus clogs the resin ducts of the tree and makes a suitable environment for young beetles to develop in. The eggs hatch and the grubs or larvae grow and feed at right angles to the egg gallery, eventually killing the tree by girdling.

GENERAL LIFE CYCLE





WHITE PINE BLISTER RUST

The mountain pine beetle is not the only enemy of white pine in the Lightning Creek drainage. White pine blister rust is also present. Blister rust is a fungus similar to wheat rust, which attacks and kills all five-needle pine, which includes western white pine. Large numbers of smaller white pine trees have been killed by blister rust in the Lightning Creek drainage. Larger trees are also killed by blister rust, but it is a slow process and may take as long as 20 years.

CONTROL BY LOGGING

The best method to control the beetle is to remove the beetle-infested trees from the woods by logging. This prevents the beetles from spreading into healthy stands of timber, and has the added advantage of salvaging the trees for use as lumber and other wood products. It is hoped that the white pine trees in the bottom along Lightning Creek from the East Fork to Wellington Creek can be saved from beetle attack by logging the beetle infested trees farther up the drainage.

Foresters have estimated that approximately 60 million board feet of timber will be lost to the beetles if the timber is not harvested. This is enough timber to build approximately 6,000 average-size homes. In addition to the loss of the timber, the dead snags would create a very high fire hazard and would mar the esthetic values of the drainage if the area was abandoned to the beetles.

COORDINATION WITH OTHER FOREST USES

Under the multiple use guidelines within which the Forest Service operates the possible impacts on all forest resources (water, soil, recreation, wildlife, range and timber) have been carefully considered in the development of logging plans. The logging project has been designed to cause the least impact on the other resources and uses of the drainage.



As you travel in Lightning Creek drainage you will see these signs. They will point out beetle infested trees and may give some specific information about them.

FOREST SERVICE CREED

The Forest Service of the U.S. Department of Agriculture is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives — as directed by Congress — to provide increasingly greater service to a growing Nation.

